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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/547,191	06/28/2006	Guntram Scheible	0070996-000044	9175

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EXAMINER
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SALZMAN, KOURTNEY R

ART UNIT	PAPER NUMBER
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1795

NOTIFICATION DATE	DELIVERY MODE
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12/11/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/547,191	<b>Applicant(s)</b> SCHEIBLE ET AL.	
	<b>Examiner</b> KOURTNEY R. SALZMAN	<b>Art Unit</b> 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2005 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>August 29, 2005</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Summary***

1. This is the first office action on the merits for application 10/547,191, which is a 371 National Stage application of PCT/EP03/02529, filed 3/12/2003.
2. This office action is based on the most recent preliminary amendment to the claims filed on August 29, 2005.
3. Claims 1-11 are currently pending and have been fully considered.

### ***Claim Objections***

4. Claims 1-5 and 11 objected to because of the following informalities: In claim 1, on line 11, as counted on the preliminary amendment filed August 29, 2005, an open ended "(" has been added, however, this is inappropriate as the parenthesis is never closed and it is not necessary. Please remove the "(".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 6 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by ABB Patent GmbH or ABB et al(DE 201 07 112 U1), as supplied in the IDS dated August 29, 2005, as discerned through a machine translation.

Regarding claims 1 and 6, ABB et al teaches a field device 1 comprising a housing 1 and pipeline 2 carrying process media (as indicated by the arrow) to thermoelectric transducer 14 with wireless communication interface 12 and 121. The transducer comprises a face parallel to the pipe on the bottom of the transducer which faces the process while another face of the transducer which also runs parallel to the pipe but on the top of the transducer faces away from the process. Furthermore, piece 141 of the thermoelectric converter is located outside of the pipeline. The broadest reasonable interpretation of outside the pipeline includes at least part of the converter (or in this case, most) of the converter to be outside the pipeline. The field device also has a face toward the process (the side running parallel to the pipe at the pipe interface) and with the other three sides of the dashed lines facing away from the process.

Regarding claims 2 and 7, the thermoelectric converter is described in the specification to utilize the temperature difference between point 141 and 142, regardless of the site where the colder or hotter temperature is occurring. This is also the inherent operation of thermoelectric converters.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

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applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by BOCKO et al (US PG PUB 2002/0145538 A1).

BOCKO et al teaches a field device comprising a housing (limitations a and d of claim 1 of BOCKO et al), process media to create heat in base 22, and wireless data link 120 of figure 12. Figure 12 of BOCKO et al is shown below to identify the transducer faces facing away and toward the process.

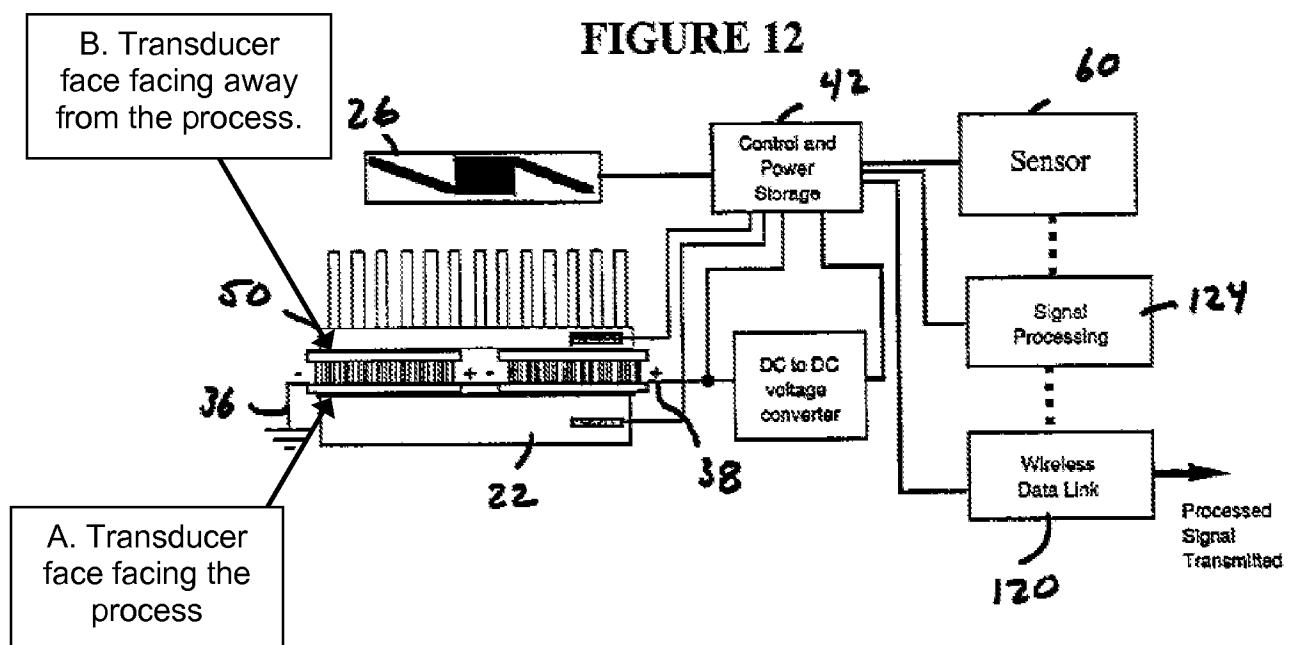


FIGURE 12 of BOCKO et al.

As noted in the figure above, face A of the transducer faces the process while face B of the transducer faces away from the process. All sides other than face A of the transducer are situated facing away from the process. For example, the

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fan (26), control and power storage (42), sensor (60), signal processing (124) and wireless data link (120) are all situated facing away from the process while the base (22) and face A of the transducer are all situated facing the process.

Regarding claims 2 and 7, while figure 12 shows a hot and cold side discretely, it is through the design of the module that these sides are determined, not that the structure of the thermoelectric converter prevents a different hot and cold orientation. Therefore, it is inherently possible for the thermoelectric converter to function in either directional heat flow, as the structure for both operations is equivalent.

Regarding claims 3, 4, 8 and 11, BOCKO et al shows, in figure 12, for the fins on side 50 to function as a radiator or heat sink, in paragraph 54. Claim 1 of BOCKO et al also describes all the pieces as being inside the housing.

Regarding claim 5, BOCKO et al teaches power storage and a controller in reference number 42.

Regarding claim 9, BOCKO et al teaches a control and power storage system 42 which minimizes energy consumption (as discussed in the minimized operation with the fan in paragraph 63) in the controller. Furthermore, the power system is shown to be connected to the wireless interface in figure 12.

Regarding claim 10, BOCKO et al teaches a control and power storage system 42 which minimizes energy consumption (as discussed in the minimized operation with the fan in paragraph 63) in the controller. Furthermore, the rate of power change (and in turn the rate of temperature change) is monitored by the controller or central control.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 3-5 and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over ABB et al (DE 201 07 112 U1), in view of BOCKO et al (US PG PUB 2002/0145538).

ABB et al teaches all the limitations of claims 1, 2, 6 and 7 but is not explicit in the description of the thermoelectric or the layout of the field device.

Regarding claims 3, 4, 8 and 11, BOCKO et al shows, in figure 12, for the fins on side 50 to function as a radiator or heat sink, in paragraph 54. Claim 1 of BOCKO et al also describes all the pieces as being inside the housing.

Regarding claim 5, BOCKO et al teaches power storage and a controller in reference number 42.

Regarding claim 9, BOCKO et al teaches a control and power storage system 42 which minimizes energy consumption (as discussed in the minimized operation with the fan in paragraph 63) in the controller. Furthermore, the power system is shown to be connected to the wireless interface in figure 12.



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Regarding claim 10, BOCKO et al teaches a control and power storage system 42 which minimizes energy consumption (as discussed in the minimized operation with the fan in paragraph 63) in the controller. Furthermore, the rate of power change (and in turn the rate of temperature change) is monitored by the controller or central control.

At the time of the invention, it would have been obvious to utilize the known characteristics of the thermoelectric, the heat sink and the control system of BOCKO et al for the ambiguous characteristics of ABB et al because the same pieces are present in both systems therefore the substitution of the standard known elements of BOCKO et al would produce the same known result as in ABB et al. The elements of BOCKO et al are generic and generally known in the art therefore it would be obvious for those same elements of BOCKO et al to share similar features.

### ***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KOURTNEY R. SALZMAN whose telephone number is (571)270-5117. The examiner can normally be reached on Monday to Thursday 6:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nam X Nguyen/  
Supervisory Patent Examiner, Art Unit 1753

Krs  
12/4/2009